Form 1449 (Modified)	Atty Docket No.	Application No.:
	SRI1P028/4431-2	09/779,203
Information Disclosure Statement By Applicant	Applicant: Pelrine, et al.	
	Filing Date	Group
(Use Several Sheets if Necessary)	02/07/01	2853

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✓ KBA	A	6,048,622	04/11/00	Hagood, *et al.*			02/09/99
	B	5,915,377	06/29/99	Coffee			01/24/97
	C	5,902,836	05/11/99	Bennet, *et al.*			08/23/95
	D	5,825,453	11/10/98	Wynne, *et al.*			05/05/97
✓ KBA	E	5,642,015	06/24/97	Whitehead, *et al.*			05/01/95
✓ KBA	F	5,430,565	07/04/95	Yamanouchi, *et al.*			06/02/93
✓ KBA	G	5,254,296	10/19/93	Perlman			11/13/91
	H	5,250,784	10/05/93	Muller, *et al.*			10/24/91
	I	5,229,979	07/20/93	Scheinbeim, *et al.*			12/13/91
✓ KBA	J	5,024,872	06/18/91	Wilson, *et al.*			08/13/87
	K	4,969,197	11/06/90	Takuya			02/21/89
	L	4,885,783	12/05/89	Whitehead, *et al.*			04/10/87
✓ KBA	M	4,843,275	06/27/89	Radice			01/19/88
	N	4,518,555	05/21/85	Ravinet, *et al.*			06/14/83
	O	4,401,911	08/30/83	Ravinet, *et al.*			03/02/81
	P	4,400,634	08/23/83	Micheron			12/09/80
	Q	4,384,394	05/24/83	Lemmon, *et al.*			05/13/81
	R	3,403,234	09/24/68	Barnes, Jr.			09/11/64

Foreign Patent or Published Foreign Patent Application

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✓ KBA	S	WO 01/06575	01/25/01	PCT			X	
✓ KBA	T	WO 98/35529	08/13/98	PCT			X	
	U	WO 95/08905	03/30/95	PCT			X	

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	V	Ajluni, Cheryl, "Pressure Sensors Strive to Stay on Top, New Silicon Micromachining Techniques and Designs Promise Higher Performance", *Electronic Design – Advanced Technology Series*, October 3, 1994, pp. 67-74
	W	Anderson, R. A., "Mechanical Stress in a Dielectric Solid From a Uniform Electric Field", *The American Physical Society*, 1986, pp. 1302-1307

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Information Disclosure Statement By Applicant	Applicant: Pelrine, et al.	
	Filing Date	Group
(Use Several Sheets if Necessary)	02/07/01	2838

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	Y	Ashley, S., "Smart Skis and Other Adaptive Structures", *Mechanical Engineering*, November 1995, pp. 77-81
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	A3	Bar-Cohen, Yoseph, JPL, *WorldWide ElectroActive Polymers, EAP (Artificial Muscles) Newsletter*, Vol. 2, No. 2, December 2000.
✓ KBA	A4	Bar-Cohen, Yoseph, JPL, *WorldWide ElectroActive Polymers, EAP (Artificial Muscles) Newsletter*, Vol. 3, No.1, June 2001.
✓ KBA	A5	Bar-Cohen, Yoseph, JPL, *WorldWide Electroactive Polymer Actuators Webhub* webpages 1-7, http://ndeaa.jpl.nasa.gov/nasa-nde/lommas/eap/EAP-web.htm, downloaded July 23, 2001.
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✓ KBA	A7	Baughman, R.H., L.W. Shacklette, and R.L. Elsenbaumer, E.J. Plichta, and C. Becht, "Micro electromechanical actuators based on conducting polymers", in *Molecular Electronics, Materials and Methods*, P.I. Lazarev (ed.), Kluwer Academic Publishers, pp. 267-289 (1991)
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✓ FBP	B3	Bobbio, S., M Kellam, B. Dudley, S. Goodwin Johansson, S. Jones, J. Jacobson, F. Tranjan, and T. DuBois, "Integrated Force Arrays," in Proc. IEEE Micro ElectroMechanical Systems Workshop, Fort Lauderdale, Florida February 1993.
	B4	Bohon, K., and S. Krause, "An Electrorheological Fluid and Siloxane Gel Based Electromechanical Actuator: Working Toward an Artificial Muscle," to be published in *J. Polymer Sci., Part B. Polymer Phys.* (2000)
	B5	Brock, D. L., "Review of Artificial Muscle based on Contractile Polymers," MIT Artificial Intelligence Laboratory, A.I. Memo No. 1330, Nov. 1991.
	B6	Caldwell, D., G. Medrano-Cerda, and M. Goodwin, "Characteristics and Adaptive Control of Pneumatic Muscle Actuators for a Robotic Elbow," Proc. IEEE Int. Conference on Robotics and Automation, San Diego, California (8-13 May 1994).
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	B8	Cheng, Z.-Y., H. S. Xu, J. Su, Q. M. Zhang, P.-C. Wang, and A. G. MacDiarmid, "High performance of all-polymer electrostrictive systems," Proceedings of the SPIE International Symposium on Smart Structures and Materials: Electro-Active Polymer Actuators and Devices, March 1-2, 1999, Newport Beach, California, USA., pp. 140-148.
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	B10	Chiarelli, P., A. Della Santa, D. DeRossi, and A. Mazzoldi. 1995. "Actuation Properties of Electrochemically Driven Polypyrrole Free-standing Films," *Journal of Intelligent Material Systems and Structures*, Vol. 6, pp. 32-37, January 1995
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	C3	Egawa, S. and T. Higuchi, "Multi-Layered Electrostatic Film Actuator," Proc. IEEE Micro Electra Mechanical Systems, Napa Valley, California, pp. 166-171 (February 11-14, 1990).
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	C5	Flynn, Anita M., L.S. Tavrow, S.F. Bart, R.A. Brooks, D.J. Ehrlich, K.R. Udayakumar, and L.E. Cross. 1992. "Piezoelectric Micromotors for Microrobots," *IEEE Journal of Microelectromechanical Systems*, Vol.1, No.1, pp. 44-51 (March 1992); also published as *MIT AI Laboratory Memo 1269*, Massachusetts Institute of Technology (February 1991).
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	C8	Furukawa, T., and N. Seo., "Electrostriction as the Origin of Piezoelectricity in Ferroelectric Polymers," *Japanese J. Applied Physics*, Vol. 29, No. 4, pp. 675-680 (April 1990).
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	C11	M. Greene and J. A. Willett, and Kornblub, R., "Robotic systems," in ONR Report 32198-2, Ocean Engineering and Marine Systems 1997 Program (Dec. 1997)

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	D8	Kaneto, K., M. Kaneko, Y. Min, and A.G. MacDiarmid. *1995.* "Artificial Muscle: Electromechanical Actuators Using Polyaniline Films," *Synthetic Metals 71*, pp. 2211-2212, 1995
	D9	Kawamura, S., K. Minami, and M. Esashi, "Fundamental Research of Distributed Electrostatic Micro Actuator," Technical Digest of the 11th Sensor Symposium, pp. 27-30(1992).
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✓ KBA	E4	Kornbluh, R. D and R. E. Pelrine., "Dexterous Multiarticulated Manipulator with Electrostrictive Polymer Artificial Muscle," ITAD-7247-QR-96-175, SRI Project Number 7247, Prepared for: Office of Naval Research, November 1996
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	E6	Kornbluh, R., Pelrine, R. Joseph, J., Pei, Q. and Chiba, S., "Ultra-High Strain Response of Elastomeric Polymer Dielectrics", Proc. Materials Res. Soc., Fall meeting, Boston, MA, pages 1-12, December 1999
	E7	Ktech's PVDF Sensors, http://www.ktech.com/pvdf.htm, 06/06/2001, pp. 1-5.
✓ KBA	E8	Lang, J, M. Schlect, and R. Howe, "Electric Micromotors: Electromechanical Characteristics," Proc. IEEE Micro Robots and Teleoperators Workshop, Hyannis, Massachusetts (November 9-11, 1987).
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✓	G9	Pelrine, R., R. Kornbluh, and J. Joseph, "Electrostriction of Polymer Dielectrics with Compliant Electrodes as a Means of Actuation," *Sensors and Actuators A: Physical*, Vol. 64, 1998, pp.77-85.
✓	G10	Pelrine, R, R. Kornbluh, J. Joseph, and S. Chiba, "Electrostriction of Polymer Films for Microactuators," *Proc. IEEE Tenth Annual International Workshop on Micro Electro Mechanical Systems*, Nagoya, Japan, January 26-30, 1997, pp. 238-243.
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✓	H6	Pelrine, R., R. Kornbluh, and J. Joseph, FY 1998 *Final Report on Artificial Muscle for Small Robots*, ITAD-3482-FR-99-36, SRI International, Menlo Park, California, 1999
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✓	H8	Pelrine, R., R. Kornbluh, Q. Pei, and J. Joseph. "High-Speed Electrically Actuated Elastomers with Strain Greater Than 100%", *Science*, Reprint Series, Feb. 4 2000, Vol. 287, pp. 836-839.
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Form 1449 (Modified)	Atty Docket No. SRI1P028/4431-2	Application No.: 09/779,203

Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Applicant: Pelrine, et al. Filing Date 02/07/01	Group 2858

Other Documents

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KA	I1	Pelrine, R., Roy Kornbluh, Jose Joseph, Qibing Pei, Seiki Chiba "Recent Progress in Artificial Muscle Micro Actuators," , SRI International, Tokyo, 1999 MITI/NEEDO/IMNIC, 1999
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	I3	Piezoflex™ PVDF Polymer Sensors, http://www.atmar.com/piezo/pvdf.htm, 06/06/2001.
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